

Before the
Federal Communications Commission
Washington, D.C. 20554

FCC MAIL ROOM

APR 15 2004

In the Matter of)

Amendment of Part 97 of the Commission's Rules)
Governing the Amateur Radio Services)

WT Docket No. 04-140

RM-10313, RM-10352, RM-10353,
RM-10354, RM-10355, RM-10412,
RM-10413, RM-10492, RM-10521,
RM-10582, RM-10620, RM-10621Amendment of Section 97.111 of the Amateur)
Radio Service Rules to Limit Transmissions of)
Information Bulletins)Conforming Amendments to Part 97 of)
Commission's Rules to Implement the World)
Radio Conference 1997 Final Acts)Amendment of Part 97 to Provide Color-coded)
License Documents)Amendment of Part 97 to Allow Instant Temporary)
Licensing)Amendment of the Amateur Service Rules to Limit)
One-way Voice Broadcasting on Frequencies)
Allocated to the Amateur Service)Amendment of Sections 97.111 and 97.113 of the)
Commission's Rules to Curb Certain Abuses in)
the Amateur Radio Service)Amendment of Section 97.3(a)(26) to Establish)
Two Classifications of Information Bulletins)Amendment of Section 97.305(c) to Authorize)
Image Emissions in Additional High Frequency)
Segments)**NOTICE OF PROPOSED RULEMAKING AND ORDER****Adopted: March 31, 2004****Released: April 15, 2004****Comment Date: June 15, 2004****Reply Comment Date: June 30, 2004**

By the Commission:

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I. INTRODUCTION AND EXECUTIVE SUMMARY

1. In this *Notice of Proposed Rulemaking (Notice)*, we propose to revise operating privileges for amateur radio service licensees as well as to eliminate obsolete and duplicative rules in the Amateur Radio Service. Specifically, we propose to amend the Part 97 Amateur Radio Service rules¹ in response to the filing of nineteen petitions for rulemaking and one informal request (collectively petitions).² Four petitions address on-the-air operating privileges

¹ See 47 C.F.R. Part 97.

² See Kenwood Communications Corporation, Inc., Petition for Rulemaking (filed May 1, 2001) (Kenwood Petition); Mr. Jeffery T. Briggs and Mr. William R. Tippet II, Petition for Rulemaking (filed Sep. 10, 2001) (160 m Petition); The Quarter Century Wireless Association, Inc., Petition for Rulemaking (filed Dec. 17, 2001) (QCWA Petition); Mr. John S. Rippey, Petition for Rulemaking (filed Dec. 27, 2001) (Rippey Petition); NASA John H. Glenn Research Center Amateur Radio Club, Petition for Rulemaking (filed Dec. 27, 2001) (Glenn Petition); Mr. Nickolas E. Leggett, Petition for Rulemaking (filed Feb. 11, 2002) (Leggett Petition); American Radio Relay League, Inc., Petition for Rulemaking (filed Mar. 22, 2002) (ARRL Petition). (continued....)

for amateur service licensees.³ Six petitions relate to the types of communications an amateur station may transmit.⁴ Three petitions concern the vanity call sign and special event call sign systems.⁵ Two petitions focus on the amateur service operator licensing system.⁶ Because some of the petitions have presented sufficient evidence to warrant proposing rule changes, and in the interest of administrative efficiency, we have consolidated these matters in this *Notice*. We also propose, on our own motion, other amendments to our Rules to conform the amateur radio service rules to the international *Radio Regulations*,⁷ revise portions of our amateur radio service rules, and amend certain rules to reflect changes in Commission organization and practices.

2. The major rule changes we propose today are as follows:

- Revise the operating privileges⁸ of amateur radio operators in four High Frequency bands;
- Permit auxiliary stations to transmit on the 2 m amateur service band;
- Permit amateur stations to transmit spread spectrum communications on the 1.25 m band;
- Permit amateur stations to re-transmit communications from the International Space Station;
- Allow amateur service licensees to designate the amateur radio club to receive their call sign, *in memoriam*;
- Prohibit an applicant from filing more than one application for a specific vanity call sign;

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2002) (ARRL Petition); Mr. Robert H. Birdsey, Petition for Rulemaking (filed Mar. 19, 2002) (Birdsey Petition); Dr. Michael C. Trahos, Petition for Rulemaking (filed Jan. 2, 2002) (Trahos Petition); Messrs. Marvin W. Edwards, Frank A. Lynch, and C. Norman Young, Jr., Petition for Rulemaking (filed Sep. 10, 2002) (Edwards Petition); Radio Amateur Satellite Corporation, Petition For Rule Making (filed Dec. 2, 2002) (AMSAT Petition); Mr. John J. Elengo, Petition for Rulemaking (filed Apr. 11, 2002) (Elengo Petition); Mr. Bob Sherin, Notice of Inquiry (filed Jan. 30, 2003) (Sherin Petition); Mr. Phillip E. Galasso, Petition For Rule Making (filed Feb. 12, 2003); Mr. Dale E. Reich, Petition For Rule's Change (filed Nov. 14, 2002); Mr. Dale E. Reich, Petition For Rule Change (filed Dec. 4, 2002); Mr. Dale E. Reich, Petition For Rule Change (filed Dec. 10, 2002); Mr. Jonathan S. Gunn, Petition For Rule Making (filed Jan. 22, 2003) (Gunn Petition); Mr. Mark Miller, Petition For Rule Making (filed Feb. 25, 2003) (Miller Petition); Mr. Peter Chadwick, April 9, 2001 e-mail "ITU-R Recommendation SM.329" (Chadwick Request).

³ See Kenwood Petition, 160 m Petition, ARRL Petition, Rippey Petition.

⁴ See Glenn Petition, Birdsey Petition, Elengo Petition, Gunn Petition, Galasso Petition, Sherin Petition.

⁵ See ARRL Petition, QCWA Petition, Edwards Petition.

⁶ See Reich Petition (Nov. 14, 2002), Reich Petition (Dec. 4, 2002).

⁷ See *Final Acts of the World Radiocommunication Conference (WRC-97)*, Geneva, 1997, and *Final Acts of the World Radiocommunication Conference (WRC-2000)*, Istanbul, 2000, (*Radio Regulations*); Chadwick Request.

⁸ In the amateur service, "operating privileges" generally refer to the frequency bands available to the control operator of an amateur station and to the emission types an amateur station may transmit.

- . Eliminate unnecessary restrictions imposed on certain equipment manufacturers;
- . Allow amateur radio stations in or near Alaska more flexibility in providing emergency communications; and
- . Eliminate unnecessary rules in the amateur radio operator license examination system.

3. We believe that these proposals will. (1) promote the development of the amateur radio service by providing licensees greater flexibility in the utilization of amateur service frequencies; (2) eliminate unduly burdensome or duplicative requirements that may discourage individuals from becoming amateur radio service licensees; and (3) promote efficient use of spectrum allocated to the Amateur Radio Service. We solicit comments on these proposed rule changes.

II. BACKGROUND

4. Our Rules define the Amateur Radio Service as a radiocommunication service for the purpose of self-training, intercommunication and technical investigations carried out by amateur radio operators.⁹ This definition underlies the five principles that describe the fundamental purpose of the amateur service in the United States.¹⁰ Amateur radio operators are duly authorized persons interested in radio technique solely with a personal aim and without pecuniary interest,¹¹ who carry out technical investigations¹² and engage in voluntary, non-commercial communications with other amateur radio operators located in the United States and in foreign countries.¹³ Amateur radio operators may, on a purely voluntary basis, provide essential communication links and facilitate relief actions when normal communications systems are overloaded, damaged or disrupted.¹⁴

5. The *Radio Regulations* require operators of stations in the amateur service to be licensed.¹⁵ Over time, the number of operator license classes has varied from three¹⁶ to six.¹⁷ As

⁹ See 47 C.F.R. §§ 2.1(c), 97.3(a)(4).

¹⁰ See 47 C.F.R. § 97.1. The purpose of the amateur service includes recognition and enhancement of the value of the amateur service to the public as a voluntary noncommercial communications service, continuation of the amateur's proven ability to contribute to the advancement of the radio art; expansion of the existing reservoir of trained operators, technicians, and electronic experts; and continuation of the amateur's unique ability to enhance international goodwill. 47 C.F.R. § 97.1(a)-(e)

¹¹ See 47 U.S.C. § 153(2); 47 C.F.R. §§ 2.1(c), 97.3(a)(4), 97.113.

¹² See 47 C.F.R. § 97.1.

¹³ See 47 C.F.R. § 97.111(a)(1).

¹⁴ See 47 C.F.R. § 97.401.

¹⁵ See *Radio Regulation* S25.6.

¹⁶ See Amendment of Part 12, Rules Governing Amateur Radio Service, Docket 9295, *Report and Order*, 42 FCC 98 (1951) (*1951 License Structure Decision*). At that time, the Commission converted the three classes of amateur service operator licenses, the Class A, B, and C operator licenses, to the Advanced Class and the General or Conditional Class operator licenses, respectively. The *1951 License Structure Decision* added the Novice, Technician, and Amateur Extra operator licenses classes to the amateur service license structure. After adoption of the *1951 License Structure Decision*, the amateur service operator license (continued....)

a licensee advances to each successive class, the licensee earns more frequency privileges.¹⁸ In 1999, the Commission adopted the *License Restructure Report and Order* which substantially simplified the amateur service operator license structure and examination system.¹⁹ Although the Commission retained incentives in the license structure, such as additional frequency privileges, it declined to consider a comprehensive restructuring of operating privileges.²⁰ The Commission concluded that because simplifying the license structure was independent of restructuring operating privileges,²¹ the amateur service community should have an opportunity to weigh in on such revisions before the Commission considers a comprehensive restructuring of operating privileges.²² Some of the petitions represent efforts within the amateur service community to restructure operating privileges for such licensees. On the basis of the petitions before us, we conclude that a comprehensive restructuring of operating privileges is now ripe for consideration.

III. DISCUSSION

A. Amateur Station Frequency Privileges.

6. *Background.* Our Rules authorize amateur stations to transmit communications and other radio frequency emissions in certain frequency bands.²³ The class of operator license determines the frequency band, or segment of a frequency band, on which an amateur station may transmit.²⁴ There are six classes of amateur service operator license grants currently recognized under our Rules.²⁵ Among other privileges, our Rules permit a station controlled by a Novice Class licensee or a Technician Class licensee who has received credit for passing a Morse code examination²⁶ to transmit a CW emission²⁷ on the 3675-3725 kHz, 7100-7150 kHz, and 21100-21200 kHz frequency segments and a CW, RTTY, and data emissions on the 28100-28300 kHz

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classes, in ascending order of frequency privileges, were: Novice, Technician, Conditional and General, Advanced, and Amateur Extra Class.

¹⁷ The Commission added a sixth operator license, the Technician Plus Class operator license, in 1994. See Amendment of the Amateur Service Rules to Change Procedures for Filing an Amateur Service License Application and to Make Other Procedural Changes, *Order*, 9 FCC Rcd 6111 (1994).

¹⁸ See 47 C.F.R. § 97.301.

¹⁹ See 1998 Biennial Regulatory Review -- Amendment of Part 97 of the Commission's Amateur Service Rules, *Report and Order*, WT Docket No. 98-143, 15 FCC Rcd 315, 316 ¶ 3 (1999) (*License Restructure Report and Order*), which reduced to three the number of amateur service operator licenses for which an individual may qualify (the Technician Class, General Class, and Amateur Extra Class operator licenses) and reduced the number of examination elements from eight to four.

²⁰ See 47 C.F.R. §§ 97.301, 97.305.

²¹ See *License Restructure Report and Order*, 15 FCC Rcd at 325 ¶ 17.

²² See *id*.

²³ See 47 C.F.R. § 97.301.

²⁴ See 47 C.F.R. § 97.9(a).

²⁵ See *id*.

²⁶ Technician Class licensees who have received credit for passing a Morse code examination are known within the amateur service community as "Technician Plus" Class licensees.

²⁷ We define a CW emission as International Morse code telegraphy emissions having certain emission designators. See 47 C.F.R. § 97.3(c)(1).

frequency segment.²⁸ Moreover, our Rules permit a station controlled by a General Class licensee to transmit phone emissions on the 3850-4000 kHz, 7225-7300 kHz, and 21300-21450 kHz frequency segments.²⁹ Additionally, a station controlled by an Advanced Class licensee may transmit phone emissions on the 3775-4000 kHz and 7150-7300 kHz frequency segments of the 75 m and 40 m bands.³⁰ Finally, our Rules permit an amateur station controlled by an Amateur Extra Class licensee to transmit phone emissions on the 3750-4000 kHz and 7150-7300 kHz frequency segments of the 75 m and 40 m bands.³¹ As discussed in further detail below, four petitioners request that we change the operator privileges authorized Novice Class, certain Technician Class, General, Advanced, and Amateur Extra Class amateur radio operators on the High Frequency (HF), Very High Frequency (VHF) and Medium Frequency (MF) amateur service bands.³²

1. High Frequency Privileges.

7. ARRL Petition. Background. On March 22, 2002, the ARRL requested that we eliminate the telegraphy frequency segments currently authorized to Novice and Technician Plus Class licensees, and to restructure the operating privileges authorized licensees in certain HF amateur service bands.³³ The ARRL based its request on over 4,700 responses to a survey it conducted regarding different emission subband options for four of the eight HF amateur service bands.³⁴ The ARRL notes that while the survey results did not reflect a consensus on any one HF band frequency alternative,³⁵ most respondents favored dissolving the Novice and Technician Plus Class telegraphy subbands so that additional spectrum could be authorized for phone communications.³⁶ The ARRL requests the Commission to amend Section 97.301 of its Rules to expand the frequency segments of the 80-, 40-, and 15 m HF amateur service bands that licensees may use for phone communications.³⁷ The ARRL states that a "refarming" plan based on eliminating the Novice and Technician Plus Class subbands is critical because the segments presently authorized for phone and digital communications are severely overcrowded.³⁸

8. Specifically, the ARRL Petition seeks the following: (1) Novice and Technician Plus Class licensees should be authorized to control an amateur station transmitting in any portion of the 80-, 40- and 15 m amateur service bands that provide for telegraphy operation by General

²⁸ 47 C.F.R. § 97.301(e).

²⁹ 47 C.F.R. § 97.301(d).

³⁰ 47 C.F.R. § 97.301(c).

³¹ 47 C.F.R. § 97.301(b). All frequency segments refer to ITU Region 2 authorizations.

³² The MF amateur service bands are between 300 kHz and 3,000 kHz. The HF amateur service bands are between 3000 kHz and 30,000 kHz. The VHF amateur service bands are between 30 MHz and 300 MHz. See 47 C.F.R. § 2.101

³³ See ARRL Petition at 5.

³⁴ See *id.* at 6-8.

³⁵ See *id.* at 7.

³⁶ See *id.* at 7.

³⁷ See *id.* at 9.

³⁸ See *id.* at 5.

Class licensees.³⁹ The ARRL also requests that we authorize these licensees to control an amateur station transmitting CW, RTTY and data emissions in the 28000-28300 kHz frequency segment of the 10 m band;⁴⁰ (2) General Class licensees should be authorized to control an amateur station transmitting voice communications on the 3800-4000 kHz, 7175-7300 kHz and 21275-21450 kHz frequency segments;⁴¹ (3) Advanced Class licensees should be authorized to control an amateur station transmitting voice communications on the 3750-4000 kHz and 7125-7300 kHz frequency segments;⁴² and (4) Amateur Extra Class licensees should be authorized to control an amateur station transmitting voice communications on the 3725-4000 kHz and 7125-7300 kHz frequency segments.⁴³

9. *Discussion.* The Commission received over one hundred and twenty comments regarding the ARRL's Petition. Several commenters express general support for the ARRL's refarming request.⁴⁴ Other commenters also note that the Novice Class subbands are underutilized thus agreeing with the ARRL's request that we reallocate these subbands to other uses.⁴⁵ Other commenters supporting the ARRL's request suggest that we either establish different frequency limits for the phone subbands,⁴⁶ reallocate the Novice subband spectrum for only digital and experimental communications,⁴⁷ allow Novice and Technician Plus Class licensee use of CW in all HF and MF bands,⁴⁸ or allow Novice and Technician Plus Class licensee use of all narrowband digital modes in addition to CW in 80-, 40-, 15-, and 10 m bands.⁴⁹ As an alternative to the ARRL's request, two commenters suggest that we eliminate subbands altogether and allow the amateur service community to address emission separation on its own through voluntary band planning.⁵⁰ This suggestion, we note, was opposed by others.⁵¹

³⁹ See ARRL Petition at 8. The ARRL explains that Novice Class and these Technician Class operators would be precluded from transmitting in segments of these bands where General, Advanced and Amateur Extra Class Licensees are authorized to transmit a phone emission. *Id*

⁴⁰ See *id* at 12.

⁴¹ See ARRL Petition at 9-12.

⁴² See ARRL Petition at 9-12.

⁴³ See ARRL Petition at 9-12.

⁴⁴ See, e.g., Richard Fowler Comments at 1, William R. Tippet Comments at 1, Jeffery T. Briggs Comments at 1, Neil J. Nitzberg Comments at 1, Wayne C. Klusman Comments at 1, Frederick C. Gantzer Comments at 1, Ed Murphy Comments at 1, Thomas F. Giella Comments at 1, William R. Tippet Reply Comments at 1.

⁴⁵ See, e.g., Kenneth V. Hudelson Comments at 1, Timothy J. Fiebig Reply Comments at 1, Robert S. Hartman Comments at 1, Mark Richards Comments at 1, Patrick E. Freeman Comments at 1.

⁴⁶ See, e.g., Donald B. Chester Comments at 2, Alan J. Wormser Comments at 1, Howard Parrish, Jr., Comments at 1, John L. Barber Comments at 1, James I. Burke Comments at 1.

⁴⁷ See, e.g., Timothy J. Fiebig Comments at 3, Scott D. Hernalsteen Comments at 1, Brian P. Burke Comments at 2, Timothy J. Fiebig Reply Comments at 2, Hans Brakob Reply Comments at 1, ADC Telecommunications Amateur Radio Club Reply Comments at 1, Mark Spatny Comments at 1, Nickolaus E. Leggett Comments at 1, C. K. Brakob Comments at 1.

⁴⁸ See James Miccolis Comments of at 1.

⁴⁹ See, e.g., Alan J. Wormser Comments at 1, Jim Evans Comments at 1, William F. Osler Comments at 1.

⁵⁰ See Donald B. Chester Comments at 1-2, Philip E. Galasso Comments at 1.

⁵¹ See William R. Tippet Reply Comments at 1, John S. Rippey Reply Comments at 1.

10. On the other hand, some commenters oppose the request explaining that the current allocation of spectrum for voice communications is sufficient.⁵² Two commenters in particular state that allocating additional spectrum for single sideband (SSB) phone communications is spectrum-inefficient.⁵³ Others oppose the request explaining they would prefer allocation of the spectrum for digital and experimental communications,⁵⁴ or that Novice and Technician Plus Class licensees receive authorization to transmit CW in all HF and MF bands.⁵⁵ In addition, some commenters believe that the proposal will not have any significant effect on congestion in the amateur service phone bands,⁵⁶ or that the request for refarming of the amateur service frequencies should wait until after completion of the World Radio Conference in June 2003.⁵⁷

11. As an initial matter, we applaud the efforts of the ARRL in developing emission subband options⁵⁸ and presenting these options to the amateur service community.⁵⁹ We believe that the tremendous volume of survey responses indicates intense interest on the part of the amateur service community to promote spectrum efficiency. Because the ARRL Petition addresses the operating privileges of all classes of licensees on these amateur service bands, we believe that the ARRL Petition provides a basis for a comprehensive restructuring of operating privileges. We note that, as proposed, no licensees would lose any spectrum privileges and that General, Advanced, and Amateur Extra Class licensees would gain spectrum for phone emissions, one of the most popular operating modes on the HF bands. For these reasons, we will propose amending Part 97 of our Rules as the ARRL requests. We seek comment on this proposal.

12. Ripley Petition. Background. On December 27, 2001, Mr. John S. Ripley⁶⁰ requested that we authorize additional telegraphy and phone privileges in the 80-, 40-, 30-, 17-, 15-, 12-, and 10 m amateur service bands to Novice and Technician Plus Class amateur service licensees.⁶¹ The petitioner claims that the public interest would be served by increasing both the total number of amateur radio licensees and the number of licensees who are proficient in Morse

⁵² See, e.g., Mark Farr Comments at 1, Merritt W. Olson Comments at 1, Ken Cubilo Comments at 1.

⁵³ See Brandon White Comments at 1, William K. Mebry Comments at 1.

⁵⁴ See, e.g., Mark Spatny Comments at 1, Nickolaus E. Leggett Comments at 1, C. K. Brakob Comments at 1.

⁵⁵ See James Miccolis Comments at 1.

⁵⁶ See, e.g., Stephen L. Wolfcale Comments at 1, Michael Dinelli Comments at 1, Edwin R. Kessler Comments at 1.

⁵⁷ See Donald R. Putnick Comments at 1, John P. Flynn Comments at 1.

⁵⁸ See *id.* at 7.

⁵⁹ See *id.* at 6, n.3.

⁶⁰ See Mr. John S. Ripley Petition For Rule Making at 9 (filed Dec. 27, 2001) (Ripley Petition).

⁶¹ The petition requests the Commission to authorize Novice and Technician Plus Class amateur service licensees telegraphy privileges in the 3650-3750 kHz, 7050-7150 kHz, 10.110-10.130 MHz, 18.080-18.168 MHz, 21.050-21.200 MHz, 24.900-24.930 MHz, 28.060-28.500 MHz frequency segments, and phone privileges in the 18.100-18.168 MHz and 24.930-24.990 MHz frequency segments, in addition to the phone and RTTY/Data privileges currently authorized in the 10 m amateur service band. The Ripley Petition was placed on *Public Notice* on January 8, 2002. See *Public Notice*, Report No. 2522 (rel. Jan. 8, 2002). A list of commenters is presented in Appendix B.

code.⁶² The petitioner also states that the rule change would provide a greater opportunity for Novice and Technician Plus Class licensees to establish contacts with other amateur radio operators, thus enhancing their operating experience.⁶³

13. *Discussion.* Over forty comments were filed in response to this petition. The majority of commenters opposed the petition as unnecessary due to the ease in upgrading from the Novice and Technician Plus Class to the General or Amateur Extra Class.⁶⁴ Other commenters argue that Novice and Technician Plus Class privileges have already expanded significantly,⁶⁵ and that operating privileges would be more valued if they were achievement-based.⁶⁶ Other commenters support the petition so long as the frequency subbands remain combined⁶⁷ and a call sign system is developed to allow licensees to determine whether an operator has the requisite privileges for the frequency on which the station is transmitting.⁶⁸

14. Based on our review of the record, we are not persuaded to amend our rules as the petitioner requests. We believe that a Novice or Technician Plus Class licensee can easily upgrade to the General or Amateur Extra Class,⁶⁹ thereby obtaining access to significantly more spectrum and greatly increasing the chance of establishing contacts with other amateur radio stations. Additionally, because the number of Novice and Technician Plus Class licensees has declined significantly,⁷⁰ we believe that we should address operating privileges for these license classes only in a comprehensive restructuring of operating privileges for all license classes.⁷¹

15. *Miller Petition. Background.* On February 25, 2003, Mr. Mark Miller requested that we amend Section 97.305(c) of our Rules to allow an amateur station to transmit an image emission that occupies a bandwidth of 500 Hz or less on the frequency segments of HF amateur

⁶² See Rippey Petition at 6.

⁶³ See *id*

⁶⁴ See, e.g., Alan J. Wormser Comments at 1, Paul Carpenter Comments at 1, Michael J. Lyness Comments at 1.

⁶⁵ See, e.g., Mike Mello Comments at 1, Hans Brakob Comments at 1.

⁶⁶ See, e.g., Jay Jenkins Comments at 1, Michael H. Lajoie Comments at 1, David M. Colburn Comments at 1, William R. Eaton Comments at 1.

⁶⁷ See, e.g., James May Comments at 1

⁶⁸ See, e.g., Dew McCarsky Comments at 1.

⁶⁹ We note that a person who either holds or has held either of these operator licenses receives credit for the five words per minute telegraphy examination after passing an examination for a General or Amateur Extra Class operator license.

⁷⁰ Between September 30, 1997 and May 1, 2003, the number of Novice Class licensees declined from 65,142 to 34,666, and the number of Technician Plus Class licensees declined from 138,078 to 69,362. See The W5YI Report, July 15, 1999 at 8; June 1, 2003, at 8. Current licensing statistics are available at <http://WWW.AH0A.ORG/FCC/Licenses.html>. On the basis of the trends in this data, we are persuaded that licensees who hold Novice or Technician Plus Class operator licenses are either choosing to not renew their licenses or are using the telegraphy element examination credit provided in 47 C.F.R. § 97.505(a) to increase their operator privileges to General Class or Amateur Extra Class operator privileges.

⁷¹ We note that the ARRL, the National Association for Amateur Radio, requests a significant expansion of frequency privileges for Novice and Technician Plus Class licensees as part of a comprehensive restructuring of operating privileges it has proposed. See paras. 7-11, *infra*.

service bands now authorized for data and RTTY emission types.⁷² In support of this request, Mr. Miller states that personal computers with sound cards and software have made it possible for amateur radio operators to develop new communication systems and that these systems are being used on the amateur service HF bands.⁷³ Petitioner explains that one system in use combines a digital emission and a narrowband facsimile (FAX) emission,⁷⁴ thereby allowing the operator to establish communications using text, then automatically switch to a FAX emission, then automatically switch back to the digital emission.⁷⁵ He also explains that another system⁷⁶ uses transmitted pulses to directly write images on paper or a computer screen.⁷⁷ Petitioner notes that amateur radio operators worldwide have been using these communication systems since late December, 2002, and that the use of these systems has not caused harmful interference to other amateur service communications, but that our Rules do not authorize an amateur station to transmitting an image emission type in frequency segments of the HF bands that are authorized for data emission types.⁷⁸ He requests, therefore, that our Rules be amended to reflect current emission and operating practices, and to limit the occupied bandwidth of image emissions in data segments of the HF bands to 500 Hz or less so that the narrow bandwidth nature of these band segments is maintained.⁷⁹

16. *Discussion.* As an initial matter, we note that one of the purposes of the amateur service is to contribute to the advancement of the radio art.⁸⁰ We believe that amateur radio operators using amateur service spectrum to develop new communications systems are using the service in a manner that is consistent with the basis and purpose of the amateur service. We also believe that our Rules should not be an impediment to amateur radio operator's development of new or improved communication systems. In this regard, we note that the reason amateur radio operators currently may not transmit communications that combine image emission types and data emission types on HF frequency segments where data emissions are authorized is not a technical reason, but rather is because our Rules do not authorize stations to transmit both image and data emission types on any HF frequency segments.⁸¹ We also note that amateur radio operators apparently have developed communication systems and technologies that transmit both image and data emission types, and that they are using these systems for communicating. For this reason, we are persuaded that our Rules are not in harmony with current emission and operating practices and that our Rules may be impeding amateur radio operators in advancing the radio art. We believe, therefore, that petitioner has presented sufficient reason to justify the requested rule amendment. We will not, however, propose to revise Section 97.307(c) as requested by the petitioner. Rather, we believe that revising the definition of data emission types in Section

⁷² See Mark Miller Petition For Rule Making at 1 (filed Feb. 25, 2003) (Miller Petition).

⁷³ See *id.*

⁷⁴ Emission type F2C (FAX) is an image emission type in the amateur service. See 47 C.F.R. § 97.3(c)(3).

⁷⁵ See Miller Petition at 1.

⁷⁶ See *id.* This system is commonly referred to as the Hellschreiber system and uses emission type A1C, which also is an image emission type.

⁷⁷ See *id.* at 1-2.

⁷⁸ See *id.*

⁷⁹ See *id.* at 2.

⁸⁰ 47 C.F.R. § 97.1(b).

⁸¹ See 47 C.F.R. § 97.305(c).

97.3(c) to include image emission types currently being used and to limit image emissions to 500 Hz or less is consistent with the petitioner's request and will provide the amateur service community greater flexibility in developing communication systems and communication technology while maintain the narrow bandwidth nature of the data emission band segments. Specifically, we propose to revise the definition of data emission types that amateur stations may transmit to include emission types A1C and F2C⁸² (FAX) having an occupied bandwidth of 500 Hz or less. We request comment on this proposal

2. Very High Frequency Privileges.

17. Auxiliary stations. *Background.* The amateur service rules define an auxiliary station as an amateur station, other than one in a message forwarding system,⁸³ that is transmitting point-to-point communications within a system of cooperating amateur stations.⁸⁴ Section 97.213(a)⁸⁵ of the Commission's Rules provides that an amateur station on or within 50 km of the Earth's surface may be under telecommand⁸⁶ where there is a radio or wireline control link between the control point and the station sufficient for the control operator to perform his or her duties.⁸⁷ If the control link between the control point and the amateur station is a radio control link, then the control link must use an auxiliary station.⁸⁸ An amateur station that is an auxiliary station may transmit on the 1.25 meter (m) and shorter wavelength bands, with certain exceptions.⁸⁹ The underlying purpose of limiting auxiliary stations to these bands is to minimize the possibility of harmful interference⁹⁰ to other amateur service stations and operations, particularly "weak signal"⁹¹ activity in the 2 m (144-148 MHz) band.⁹²

⁸² See 47 C.F.R. §§ 2.201, 2.202 for the rules that apply to emissions.

⁸³ See 47 C.F.R. § 97.3(a)(31). A "message forwarding system" is a voluntary amateur station arrangement whereby communications are sent from the control operator of an originating station to the control operator of one or more destination stations by one or more forwarding stations. Examples of message forwarding systems in the amateur service include linked repeater systems and packet radio message forwarding systems.

⁸⁴ See 47 C.F.R. § 97.3(a)(7).

⁸⁵ See 47 C.F.R. § 97.213(a).

⁸⁶ See 47 C.F.R. § 97.3(a)(41). "Telecommand," or remote control, is a one-way transmission to initiate, modify or terminate functions of a device at a distance.

⁸⁷ See 47 C.F.R. § 97.105. The control operator ensures proper operation of the station in accordance with the privileges authorized in the license.

⁸⁸ See 47 C.F.R. § 97.213(a).

⁸⁹ See 47 C.F.R. § 97.201(b). Auxiliary stations do not have authorization to use the 219-220 MHz, 222.000-222.150 MHz, 431-433 MHz and 435-438 MHz frequency segments.

⁹⁰ "Harmful interference" is interference which endangers the functioning of a radionavigation service or of other safety services or seriously degrades, obstructs, or repeatedly interrupts a radiocommunication service operating in accordance with the ITU *Radio Regulations*. See 47 C.F.R. § 2.1.

⁹¹ "Weak signal" communications are primarily Morse code telegraphy and single sideband voice messages transmitted over very long distances in the Very High Frequency (VHF) and Ultra High Frequency (UHF) amateur service bands.

⁹² See Deregulation of Part 97 of the Commission's Rules to Simplify the Licensing and Operation of Complex Systems of Stations and Modify Repeater Subbands in the Amateur Radio Service, *Report and Order*, Docket No. 21033, 66 FCC 2d 207, 215 ¶ 6 (1977). In 1986, the Commission reaffirmed this
(continued....)

18. On November 4, 1999, Kenwood Communications Corp. (Kenwood), a manufacturer of amateur radio equipment, requested a declaratory ruling confirming that its "Sky Command System" (Sky Command)⁹³ complies with the amateur service rules.⁹⁴ Alternatively, Kenwood requested the Commission to grant blanket rule waivers so that amateur service licensees could utilize Sky Command.⁹⁵ In 2000, the Public Safety and Private Wireless Division denied Kenwood's request, concluding that Section 97.201(b) of the Commission's Rules does not authorize auxiliary stations to transmit on the 2 m band, and that Kenwood did not meet the standards for a waiver request.⁹⁶

19. Subsequently, on May 1, 2001, Kenwood requested that we amend Section 97.201(b) of our Rules to allow auxiliary stations to transmit on the 2 m band above 144.5 MHz, except 145.8-146.0 MHz, in addition to the frequency segments previously authorized.⁹⁷ Kenwood states that this proposed rule change would increase the flexibility of amateur radio licensees without adversely affecting other services or amateur radio stations that use the 2 m band, and would promote the development and use of new technology, including Sky Command.⁹⁸

20. *Discussion.* The Commission received twenty-four comments supporting Kenwood's request and sixteen comments opposing the request. Those supporting Kenwood's request state that (a) the 2 m band is not heavily used⁹⁹ and such use is no different than other uses already occurring on the band,¹⁰⁰ (b) auxiliary stations transmit on short distance simplex channels which would not cause interference to other stations on the band,¹⁰¹ (c) it would allow for the development of new emergency communication systems and capabilities¹⁰² and support other

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interference-minimization approach by rejecting a proposal to eliminate the frequency restrictions applicable to auxiliary stations. *See* Amendment of the Amateur Service Rules to Allow Auxiliary Operation on All Amateur Service Frequencies, except 431-433 MHz and 435-438 MHz, *Order*, 51 Fed. Reg. 11759, 11760 ¶ 4 (1986).

⁹³ Kenwood's "Sky Command system" permits amateur service licensees who do not have sufficient space for HF antennas, or who live in areas with restrictive covenants, to operate their HF equipment at remote locations through the use of VHF and UHF channels.

⁹⁴ *See* Kenwood Communications Corp. Request for Declaratory Ruling or Waiver of Applicable Rule Sections (filed Nov. 4, 1999) (Kenwood Request).

⁹⁵ *See* Kenwood Request at 9.

⁹⁶ *See* Kenwood Communications Corp. Request for Declaratory Ruling to Determine Compliance With Applicable Sections of Part 97 of the Commission's Rules or Waiver of Applicable Rule Sections, *Order*, 15 FCC Rcd 13819, 13821 ¶ 8 and 13824 ¶ 14 (2000).

⁹⁷ *See* Kenwood Petition at 1. The Kenwood petition was placed on public notice on October 19, 2001. *See* Public Notice, Report No. 2507 (rel. Oct 19, 2001). A list of commenters is presented in Appendix B.

⁹⁸ *See id.*

⁹⁹ *See, e.g.*, Richard C. Baum Comments at 1, Scott Honaker Comments at 1, Rodger Alexander Comments at 1, Kenneth Richards Comments at 1, Brian Badger Comments at 1, Martin S. Wilcoxson Comments at 1, Doug Young Comments at 1, Gary P. Standorf Comments at 1.

¹⁰⁰ *See* Brad Bollinger Comments at 1.

¹⁰¹ *See* Ron Karger Comments at 1, John McAuley Comments at 1. "Simplex communications" are direct, or on-channel, station-to-station communications.

¹⁰² *See e.g.*, Rodger Alexander Comments at 1, Brian Badger Comments at 1, Greg Peralta Comments at 1, Timothy P. Dugan, Jr. Comments at 1, Richard Illman Comments at 1.

applications such as controlling an HF station¹⁰³ in a vehicle,¹⁰⁴ or from an antenna-restricted residence,¹⁰⁵ and (d) it is consistent with flexible service rules.¹⁰⁶

21. On the other hand, some commenters state that it is not necessary for auxiliary stations to transmit on the 2 m band because sufficient amateur service spectrum is available on and above the 220 MHz band.¹⁰⁷ Others claim that the 2 m band is heavily used,¹⁰⁸ and argue that increased interference will occur if the rules are revised as Kenwood requests.¹⁰⁹ Some commenters believe that existing rules are sufficient to address this concern,¹¹⁰ or that licensees can either address this issue amongst themselves or through existing coordination policies.¹¹¹

22. Because we have no basis to conclude that auxiliary stations transmitting on the 2 m band would cause harmful interference or that user coordination would not be possible,¹¹² we believe that Kenwood's proposed rule change will be consistent with our flexible-use policy in the amateur service. In this regard, we note that the frequency segments Kenwood requests does not affect the frequency segments authorized to automatically controlled beacon stations,¹¹³ space stations,¹¹⁴ earth stations¹¹⁵ or those frequency segments that amateur radio operators have voluntarily agreed to use for simplex and weak signal communications.¹¹⁶ We therefore believe the record in this proceeding warrants proposing the amendment of Section 97.201(b) of our Rules as Kenwood requests, and we seek comment on this proposal.¹¹⁷

¹⁰³ The frequency range from 3,000 kHz to 30,000 kHz is denoted as HF. See 47 C.F.R. § 2.101. In the metric system, it is called the shortwave range and, expressed in wavelengths, it lies between 100 meters and 10 meters. Thus, the amateur service bands between 3,000 kHz and 30,000 kHz are also known as shortwave bands.

¹⁰⁴ See, e.g., James Rick Sohl Comments at 1.

¹⁰⁵ See, e.g., Robert Koerner Comments at 1, Richard Illman Comments at 1.

¹⁰⁶ See, e.g., Kenneth Richards Comments at 1, Greg Peralta Comments at 1.

¹⁰⁷ See, e.g., William J. Gallagher Comments at 1, Richard M. Winter Comments at 1, Nickolaus E. Leggett Comments at 1, Steven James Robeson Comments at 1, D. Platt Comments at 1, Thomas E. Walsh Comments at 1, R. Merhar Comments at 1.

¹⁰⁸ See, e.g., William J. Gallagher Comments at 1, D. Platt Comments at 1, Robert Mitleri Comments at 1.

¹⁰⁹ See, e.g., Steven James Robeson Comments at 1, Matthew W. Sadler Comments at 1, Philip Karras Comments at 1, W. Lee McVey Reply Comments at 2.

¹¹⁰ See, e.g., Mr. Galasso Comments at 2.

¹¹¹ See, e.g., Leonard J. Umina Comments at 1, Robert Fuller Comments at 1.

¹¹² This prohibition was adopted as a means to minimize the possibility of harmful interference to other amateur service stations and operations in the 2 m band.

¹¹³ See 47 C.F.R. § 97.203 (d).

¹¹⁴ See 47 C.F.R. § 97.207 (c).

¹¹⁵ See 47 C.F.R. § 97.207 (b).

¹¹⁶ See The ARRL's FCC Rule Book, (John Hennessee et al. eds.) 4-14, 4-15 (2000) (discussion of the 2 m voluntary band plan).

¹¹⁷ See 47 C.F.R. § 97.201(b).

23. Spread spectrum. Background. Currently, we authorize amateur stations to transmit Spread Spectrum (SS) emission types on any amateur service frequency above 420 MHz.¹¹⁸ In its petition, the ARRL also requests that we amend the rules to authorize amateur stations to transmit SS emission types on an additional 3 MHz of amateur service spectrum.¹¹⁹ Specifically, the ARRL requests that we amend Section 97.305(c) to authorize amateur stations to transmit SS emission in the frequency segment 222-225 MHz.¹²⁰ In support of this request, the ARRL states that presently there is no VHF band in which amateur stations may transmit SS emissions¹²¹ and that authorizing amateur stations to transmit these emissions on the 1.25 m band would be consistent with the flexible regulatory framework the Commission provided in 1999 when it revised the rules¹²² to permit amateur stations to transmit different types of SS emissions.¹²³ The ARRL also states that this requested rule revision would allow amateur radio operators to continue the development of new services through experimentation, would promote technological innovation, and would eliminate unnecessary regulatory burdens.¹²⁴ With regard to the impact of this requested revision on other amateur stations using the 1.25 m band, the ARRL states that there are significant opportunities for re-use of this spectrum for SS communications and experimentation¹²⁵ and that SS emissions in the 1.25 m band would remain subject to the restrictions set forth in Section 97.311¹²⁶ of our Rules.¹²⁷ Two comments were received concerning this requested rule change. One commenter states he supports this request.¹²⁸ Another commenter, however, opposed the request explaining that interference to other amateur stations using the 220 MHz band in Southern California may result.¹²⁹

24. Discussion. The Commission adopted the present limitation restricting amateur stations to transmitting SS emission types only on frequencies above 420 MHz in 1985.¹³⁰ These limitations were adopted to reduce the interference potential of SS transmissions.¹³¹ We note that there has been no showing that SS transmissions have caused or would cause harmful interference. Additionally, we do not believe that mere speculation of interference to other

¹¹⁸ See 47 C.F.R. § 97.305(c).

¹¹⁹ See ARRL Petition at 13.

¹²⁰ See *id.* at 14. The 222-225 MHz frequency segment is part of the 1.25 m amateur service band.

¹²¹ See ARRL Petition at 14.

¹²² See Amendment of the Amateur Service Rules to Provide For Greater Use of Spread Spectrum Communication Technologies, *Report and Order*, WT Docket No. 97-12, 64 Fed. Reg. 51471 (Sep. 23, 1999).

¹²³ See ARRL Petition at 13.

¹²⁴ See *id.* at 13-14.

¹²⁵ See *id.* at 14.

¹²⁶ See 47 C.F.R. § 97.311.

¹²⁷ See ARRL Petition at 14.

¹²⁸ See Frank A. Lynch Comments at 1.

¹²⁹ See Rich Eyre-Eagles Comments at 1.

¹³⁰ See Amendment of Parts 2 and 97 of the Commission's Rules and Regulations to authorize spread spectrum techniques in the Amateur Radio Service, *Report and Order* GEN. Docket No. 81-414, 99 FCC 2d 1432 (1985). The text of the *Report and Order* was printed at 50 Fed. Reg. 23423 (1985).

¹³¹ See 50 Fed. Reg. 23424 ¶ 5.

stations is a basis for continuing to prohibit amateur stations from transmitting SS emission types in an additional frequency band. We believe that authorizing amateur stations to transmit SS emission types in the 1.25 m band would be consistent with the experimental purpose of the amateur service¹³² and possibly allow amateur radio operators to contribute to the advancement of communications technology. We also believe that retaining the requirement that SS emission in the 1.25 m band remain subject to the restrictions set forth in Section 97.311¹³³ would be sufficient to insure that amateur stations transmitting SS emission types do not impact the operation of other amateur stations. Therefore, we propose to revise Section 97.305(c) as requested by the ARRL and we request comment on this proposal.

25. We note, however, that in addition to the 1.25 m band, we authorize amateur stations to transmit on two other frequency bands in the VHF portion of the spectrum and that these bands, the 6 m¹³⁴ and the 2 m¹³⁵ amateur service bands, each contain 4 MHz of spectrum as compared to the 3 MHz of spectrum in the 1.25 m band. It appears to us that because both of these bands are wider than the 1.25 m band, these two additional bands may be even more useful for SS experimentation than the 1.25 m band because more spectrum is available for spreading of the emissions. We also see no reason that the restrictions on SS emissions in other bands¹³⁶ would not be sufficient to insure that amateur stations transmitting SS emission types do not impact the operation of other amateur stations in the 6 m and 2 m amateur bands. Additionally, we see no technical reason why we should propose authorizing amateur stations to transmit SS emissions in the 1.25 m band, but not the 6 m or 2 m amateur bands. Therefore, we request comment regarding whether we should allow amateur stations to transmit SS emission types on either or both of the 6 m and 2 m amateur service bands, in addition to the 1.25 m band.

3. Medium Frequency Privileges.

26. *Background.* The 160 m amateur service band¹³⁷ is the only MF¹³⁸ amateur service band and the lowest frequency band the amateur service is authorized.¹³⁹ Because the 160 m amateur service band experiences very high ionospheric absorption during daylight hours and high levels of atmospheric noise during the summer, the distance communications can be transmitted and received on this band is limited, absent very sophisticated receiving systems.¹⁴⁰ Conversely, at night and during sunset and sunrise time periods, because the ionospheric absorption is significantly less, and during the winter because atmospheric noise is less, longer

¹³² See 47 C.F.R. § 97.1

¹³³ See 47 C.F.R. § 97.311.

¹³⁴ The 6 m band is the 50-54 MHz frequency segment.

¹³⁵ The 2 m band is the 144-148 MHz frequency segment.

¹³⁶ See 47 C.F.R. § 97.311.

¹³⁷ The 160 m band is the 1800-2000 kHz frequency segment.

¹³⁸ The frequency range from 300 kHz to 3,000 kHz is denoted as MF. See 47 C.F.R. § 2.101. In the metric system, this range is referred to as the medium frequency range and, expressed in wavelengths, lies between 1000 m and 100 m. Thus, the amateur service band between 1800 kHz and 2000 kHz is an MF band.

¹³⁹ See 47 C.F.R. § 97.301(b).

¹⁴⁰ See Steve Ireland, Mike Bazley, and Bob Brown, *Equinoctial and Diurnal Path Switching*, CQ Magazine, Feb. 2002 at 22-28, and Mar. 2002 at 24-29.

distance two-way communications on this band are more likely to result.¹⁴¹

27. The Commission authorizes amateur stations to transmit either an international Morse code telegraphy (CW) or a voice emission type on any channel in the 160 m band.¹⁴² Specifically, an amateur station controlled by a General, Advanced, or Amateur Extra Class amateur service licensee may transmit a CW, RTTY (radioteletype), data, phone, or image emission on any channel in the band.¹⁴³ In order to accommodate specific operating activities, the amateur service community has developed a voluntary band plan for the 160 m amateur service band. The goal of this voluntary band plan is to minimize interference between stations simultaneously engaging in different operating activities.¹⁴⁴ Voluntary band planning also allows the amateur service community to reallocate spectrum to accommodate changes in operating interests and technologies. Prior to July of 2001, the generally recognized 160 m voluntary band plan recommended use of the 1800-1840 kHz frequency segment for CW, RTTY and other narrowband modes, and use of the 1840-2000 kHz frequency segment for phone, image and other wideband modes.¹⁴⁵

28. In response to increased use of the 160 m band and concerns about whether the voluntary band plan was meeting the needs of 160 m users, the ARRL established a committee to review the 160 m band plan and to provide recommendations.¹⁴⁶ The committee members included Mr. Jeffery T. Briggs and Mr. William R. Tippet II.¹⁴⁷ After consideration of the committee's proposed revisions to the voluntary band plan, the ARRL recommended a division of the band into two segments: (a) the 1800-1843 kHz segment for narrowband, data and CW emissions; and (b) the 1843-2000 kHz segment for telephony, image, and other wideband emissions.¹⁴⁸

29. On September 10, 2001, Mr. Briggs and Mr. Tippet (160 m Petition) requested that we amend Section 97.305(c) in accordance with the revised voluntary 160 m band plan.¹⁴⁹ Petitioners argued that the revised band plan should be mandatory rather than voluntary.¹⁵⁰ In support of this request, petitioners state that the 160 m amateur band's unique propagation

¹⁴¹ See Steve Ireland, *Go Surf the Grey and Dark Lines*, CQ Magazine, Feb. 2001 at 38-41, and Mar. 2001 at 28-30. On the 160 m band, long-distance communications also are likely to occur during the "grey line" period, immediately before or after sunrise or sunset.

¹⁴² See 47 C.F.R. § 97.305(c).

¹⁴³ See *id.*

¹⁴⁴ See *The ARRL's FCC Rule Book*, (John Hennessee et al. eds.) 4-3 (2000).

¹⁴⁵ See *The FCC Rule Book*, (Rick Palm et al. eds.) 5-4 (1993); see also <http://www.arrl.org/announce/reports-0107/160-meter.html>.

¹⁴⁶ See <http://www.arrl.org/announce/reports-0107/160-meter.html>.

¹⁴⁷ See <http://www.arrl.org/announce/reports-0107/160-meter.html>.

¹⁴⁸ See <http://www.arrl.org/announce/board-0107/> at para. 57.

¹⁴⁹ See Jeffery T. Briggs, K1ZM and William R. Tippet II, W4ZV Petition For Rule Making at 1 (filed Sep. 10, 2001) (160 m Petition). The 160 m Petition was placed on *Public Notice* on January 8, 2002. See *Public Notice*, Report No. 2522 (rel. Jan. 8, 2002). A list of commenters is presented in Appendix B. The terms "wideband" and "narrowband" are not used in the rules to describe different emission groups.

¹⁵⁰ See 160 m Petition, Appendix at 3.

anomalies¹⁵¹ require the division of the band into wideband and narrowband frequency segments.¹⁵² Petitioners explain that such a division would greatly ease the interference that occurs between stations transmitting CW and voice emissions, particularly in the frequency segment 1800-1843 kHz during contests,¹⁵³ and when stations are using CW to attempt long distance international communications during the nighttime, at sunrise, and at sunset.¹⁵⁴

30. Over five hundred twenty comments were filed in response to this petition. The majority of commenters support the petition, explaining that stations transmitting wideband and narrowband signals cannot share the same frequency segment without interfering with each other.¹⁵⁵ These commenters also agree that we should set aside a segment of the 160 m for stations using CW and other narrowband emissions.¹⁵⁶ Commenters also generally support a mandatory band plan, explaining that voluntary band plans may not be followed by all licensees.¹⁵⁷ Other commenters agree that a mandatory band plan is needed, but suggest alternate frequency segmentation for narrowband and wideband modes.¹⁵⁸

31. On the other hand, those opposing the petition argue against setting aside frequency bands on the basis of personal operating interests.¹⁵⁹ Other commenters state that weak signal CW communications is a minority operating interest that does not warrant a special frequency set-aside.¹⁶⁰ In addition, some commenters believe that the proposal will not protect stations using CW from interference¹⁶¹ and aver that subdividing the band would result in inefficient use of spectrum.¹⁶² Moreover, some commenters generally oppose the notion of mandating a band plan.¹⁶³

¹⁵¹ See *id.*

¹⁵² See *id.* at 1, Appendix at 6-7.

¹⁵³ See *id.*, Appendix at 3.

¹⁵⁴ See *id.*, Appendix at 4.

¹⁵⁵ See, e.g., M. Robin Critchell Comments at 1, Scott Hudler Comments at 1, Steve Ireland Comments at 1, James Cook Comments at 1, George H. Hippisley Comment at 1, Joseph T. Subich Reply Comments at 1.

¹⁵⁶ See, e.g., Scott Jones Comments at 1, Henry Perras Comments at 1, Ken Caruso Comments at 1, Greg Smith ZL3IX Comments at 1, Kurt Pauer Comments at 1, Jerry Houinar K5YAA Comments at 1, G3OIT Comment at 1, Tom Rauch W8JI Comments at 1.

¹⁵⁷ See, e.g., Charles Rauch Comments at 1, Bill Kennamar Comments at 1, M. Robin Critchell Comments at 1, Eric Scace Comments at 2, Anthony B. McClenny, Jr., W3UR Comments at 1, Joseph T. Subich Reply Comments at 1, Jeffery A. Maass Reply Comment at 1.

¹⁵⁸ See, e.g., M. Robin Critchell Comments at 2, Melvin Lehmann Comments at 1, Leo Drescher Comments at 1, Gary A. Breed K9AY Comments at 1, J. Jorgensen Comments at 1.

¹⁵⁹ See, e.g., Paul S. Courson Comments at 1, David Humbertson Comments at 1, Robert Tiller Comment at 1, Louis Cruz Comments at 1.

¹⁶⁰ See, e.g., Art Pightling Comments at 1, Warren H. Ziegler, Jr. Comments at 1.

¹⁶¹ See, e.g., Art Pightling Comments at 1, Owen Mitchell Comments at 1, M. Taylor Comments at 1.

¹⁶² See, e.g., David Humbertson Comments at 1, James H. Young Comments at 1.

¹⁶³ See, e.g., Mr. Cowart Comments at 1, Warren H. Ziegler, Jr. Comments at 1, Ralph L. Duvall, Jr. Comments at 1, David Calhoun Comment at 1, R.A. Walls Comment at 1, M. Sawyer Comment at 1, Roger Johnson Comment at 1, Richard Wilder K3DI Comments at 1-2, Y. A. Feder W1UX Comment at 1.

32. *Discussion.* The Public Safety and Private Wireless Division (Division) previously addressed the issue of a mandatory band plan in lieu of a voluntary band plan in 1999.¹⁶⁴ In the *Order*, the Division denied a request¹⁶⁵ that it declare that any amateur radio station control operator who selects a transmitting frequency not in harmony with those voluntary band plans is in violation of the Commission's Rules.¹⁶⁶ It noted that such a result would be inconsistent with the fundamental principle of shared frequencies in the amateur service.¹⁶⁷ Additionally, the Division stated that granting the request would effectively transform voluntary band plans into *de facto* required mandates.¹⁶⁸ Rather, the Division found that because all amateur service frequencies are shared, our Rules do not assign a particular operating activity (such as using CW to attempt long distance international communications) to a specific frequency segment.¹⁶⁹ Because the petitioner has not presented any unique or changed circumstances to warrant a mandatory band plan, we find no basis to disturb this fundamental principle.

33. We further believe that the recently modified voluntary band plan, which provides an additional 3 kHz of spectrum for CW and narrowband operating activities, adequately accommodates the operating interests of all licensees who use the 160 m band because it was based on input from those who use this spectrum.¹⁷⁰ We note that the voluntary nature of the band plan allows amateur service licensees the flexibility to make any changes if and when they are needed to reallocate the spectrum among operating interests as new operating interests and technologies emerge or certain operating interests and technologies fall into disfavor. We also find unpersuasive the petitioner's concern that contests and special events, because they result in increased operating activity, justify a mandatory band plan. On this point, we note that participation in contests and special events is voluntary and that these operating activities are infrequent and primarily weekend or evening events. We also note that sponsors of contests, special events, and awards may choose to include in their rules a requirement that stations operate in harmony with voluntary band plans, thereby mitigating the impact of these events on other users of the band.¹⁷¹

34. The issue of willful or malicious interference between amateur service stations engaging in different operating activities was also previously addressed in the *Order*, where the Division noted that we already prohibit such interference in Section 97.101(d) of our Rules.¹⁷² In the absence of a showing that Section 97.101(d) no longer serves its purpose, we are not persuaded that a more comprehensive rule is necessary. Rather, we believe that cooperation

¹⁶⁴ See Compliance With Applicable Voluntary Band Plans in the Amateur Radio Service, *Order*, 14 FCC Rcd 20595 (1999) (*Order*).

¹⁶⁵ See American Radio Relay League, Inc., Request for Declaratory Ruling (filed Apr. 3, 1998) at 1.

¹⁶⁶ See *Order*, 14 FCC Rcd 20595. See also 47 C.F.R. § 97.101(b).

¹⁶⁷ See *Order*, 14 FCC Rcd 20595.

¹⁶⁸ See *Order*, 14 FCC Rcd at 20604 ¶ 18.

¹⁶⁹ See *Order*, 14 FCC Rcd at 20603 ¶ 17.

¹⁷⁰ 160 m Petition, Appendix 1.

¹⁷¹ See, e.g., <http://www.rsgbhfcc.org/> and <http://www.cq-amateur-radio.com/awards.html>. We note, for example, that the "Islands On The Air" contest rules prohibit operation on the 3560-3600 kHz, 3650-3700 kHz, 14060-14125 kHz and 14300-14350 kHz frequency segments, thereby mitigating impact of the contest on users of the 80- and 20 m amateur service bands.

¹⁷² See *Order*, 14 FCC Rcd at 20604 ¶ 19.

between licensees, education, and compliance with Section 97.101(d) of our Rules is sufficient to minimize interference. For these reasons, we dismiss the 160 m Petition.

B. Station Operation Standards

1. Retransmission of Space Station Communications.

35. *Background.* Prior to 1993, our Rules prohibited amateur stations from transmitting any communications that facilitated the business or commercial affairs of any party.¹⁷³ In 1993, the Commission allowed amateur radio operators to provide communications for public service projects and to satisfy personal communications needs.¹⁷⁴ To insure that amateur radio operators do not use the amateur service as a substitute for other communication services, our Rules generally prohibit an amateur station from re-transmitting programs or signals emanating from any other type of radio station except communications originating on United States Government frequencies between a space shuttle and its associated Earth stations.¹⁷⁵ Currently, there is no exception for retransmission of communications involving the International Space Station (ISS).¹⁷⁶

36. On December 27, 2001, the NASA John H. Glenn Research Center Amateur Radio Club requested that we amend our amateur service rules to allow retransmission of communications between a manned spacecraft and its associated Earth stations.¹⁷⁷ Specifically, the petitioner requests authority for amateur stations to retransmit space shuttle communications as well as communications between the ISS, or any other manned spacecraft, and its associated earth stations.¹⁷⁸ In support of this request, the petitioner states that manned occupation of the ISS (a permanent space structure) has introduced a technicality into the definition of "space shuttle" (a transport for astronauts between Earth and space) communications.¹⁷⁹ Petitioner's concern is that because the ISS is not a shuttle, the retransmission of ISS communications may be a technical violation of our Rules.¹⁸⁰ Moreover, petitioner believes that retransmitting ISS audio on amateur service frequencies is within the spirit of the exception in our Rules that allows

¹⁷³ 47 C.F.R. § 97.113(a) (1992).

¹⁷⁴ See Amendment of Part 97 of the Commission's Rules to Relax Restrictions on the Scope of Permissible Communications in the Amateur Service, PR Docket No. 92-136, *Permissible Communications Report and Order*, 8 FCC Rcd 5072 (1993). See also, Reorganization and Deregulation of Part 97 of the Rules Governing the Amateur Radio Service, PR Docket No. 88-139, *Report and Order*, 4 FCC Rcd 4719, 5073 ¶ 7 (1989).

¹⁷⁵ See 47 C.F.R. § 97.113(e). See also Amendment of Part 97 of the Commission's Rules to Relax Restrictions on the Scope of Permissible Communications in the Amateur Service, PR Docket No. 92-136, *Permissible Communications Report and Order*, 8 FCC Rcd 5072 (1993).

¹⁷⁶ We note that our Rules were revised to allow retransmission of space shuttle message prior to the development of the ISS. See Reorganization and Deregulation of Part 97 of the Rules Governing the Amateur Radio Service, PR Docket No. 88-139, *Report and Order*, 4 FCC Rcd at 5073 ¶ 7.

¹⁷⁷ See NASA John H. Glenn Research Center Amateur Radio Club Petition For Rule Making at 2 (filed Apr. 12, 2001) (Glenn Petition). The Glenn Petition was placed on public notice on January 8, 2002. See *Public Notice*, Report No. 2522 (rel. Jan. 8, 2002). A list of these commenters is presented in Appendix B.

¹⁷⁸ See *id.* at 1.

¹⁷⁹ See *id.*

¹⁸⁰ See *id.* at 2.

amateur stations to retransmit space shuttle communications.¹⁸¹

37. *Discussion.* Eight commenters supported the request stating that retransmission of space communications is a public service because these retransmissions provide an excellent signal to test and adjust station equipment¹⁸² and allow the general public to monitor the space program,¹⁸³ is used as a resource that allows schools to follow the space program,¹⁸⁴ and serves other educational purposes such as providing information in the areas of science and space exploration.¹⁸⁵ On the other hand, three commenters oppose this request explaining that such retransmissions may cause interference to the transmissions of other amateur service stations,¹⁸⁶ that one-way transmissions are not in the best interest of ham radio,¹⁸⁷ and that these transmissions are prohibited broadcasts under our Rules.¹⁸⁸

38. Based on our review of the record, we are persuaded to propose the requested rule amendment. As an initial matter, although we believe there are no distinctions between the retransmission of space shuttle and ISS communications, we seek comment on whether any distinctions exist that should result in disparate treatment between the two retransmissions. We do not anticipate that retransmissions of ISS communications would cause any significant increase in harmful interference to other amateur station's transmissions. Moreover, rules that prohibit harmful interference are already in place, should such interference occur.¹⁸⁹ In addition, we agree that the request is consistent with the intent of the current rule, which allows amateur stations to retransmit space shuttle communications. Accordingly, we seek comment on the proposed rule change.

2. Broadcast and Music Transmissions.

39. *Background.* In addition to the prohibition on certain transmissions, our Rules also prohibit amateur stations from engaging in any form of broadcasting.¹⁹⁰ The Commission adopted this prohibition to ensure that amateur service frequencies were not used as a substitute for other communication services.¹⁹¹

40. On March 19, 2002, Robert H. Birdsey requested that we delete Section 97.113(a)(4)¹⁹² and (b),¹⁹³ to allow an amateur station to broadcast and transmit music.¹⁹⁴ In

¹⁸¹ See *id.*

¹⁸² See Matt Gilbert Comment at 1.

¹⁸³ See Scott Lindsey-Stevens Comment at 1.

¹⁸⁴ See James M. May Comment at 1.

¹⁸⁵ See, e.g., John C. Holliman Comment at 1, John L. Gafford Comment at 1, John Chamberlin Comment at 1, David Duke Comment at 1, Matt Gilbert Comment at 1.

¹⁸⁶ See, e.g., Harold Tate Comment at 1.

¹⁸⁷ See, e.g., Keith E. Wyatt Comment at 1.

¹⁸⁸ See, e.g., Dr. David M. Colburn Comment at 1.

¹⁸⁹ See 47 C.F.R. § 97.101(d).

¹⁹⁰ See 47 C.F.R. § 97.113(b).

¹⁹¹ See n.175, *supra*.

¹⁹² Section 97.113(a)(4) of the Commission's Rules generally prohibits an amateur station from transmitting music using a phone emission; communications intended to facilitate a criminal act; messages
(continued....)

support of this request, petitioner argues that our Rules violate the First Amendment because they allow amateur stations to make one-way transmissions, or broadcasts, of information that is determined to be of interest to other amateur radio operators, but not the general public, and to transmit tones, as long as the tones can not form music.¹⁹⁵ Our Rules define "broadcasting" as "transmissions intended for reception by the general public, either direct or relayed."¹⁹⁶ These limitations, petitioner claims, result in the Federal government regulating non-commercial individual expression.¹⁹⁷

41. *Discussion.* We are not persuaded that the petitioner has presented sufficient reason to justify the requested rule amendment. The rules allow amateur stations to transmit one-way communications only for specified purposes and that these purposes are related to the operation of, or to communications between, amateur stations.¹⁹⁸ Amateur stations are prohibited from broadcasting and transmitting music so that the amateur service and amateur service frequencies are not used as an alternative to broadcast services and the frequencies these other services are authorized.¹⁹⁹ With regard to the petitioner's claim that amateur stations currently are permitted to make only certain one-way "broadcast" transmissions, we note that not all one-way transmissions are broadcasts as the term is defined in our Rules because not all one-way transmissions are intended for reception by the general public.²⁰⁰ In this regard, we note that the one-way transmissions petitioner refers to are information bulletins, which we permit amateur stations to transmit.²⁰¹ We also note that tones transmitted by amateur stations are not transmitted with the intent of forming "music," but rather are the result of transmitting a test emission to adjust equipment,²⁰² transmitting a CW emission,²⁰³ or transmitting a data emission.²⁰⁴ To allow amateur stations to transmit music or broadcast, as the term is defined in our rules, would be

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in codes or ciphers intended to obscure the message's meaning; obscene or indecent words or language; or false or deceptive messages, signals or identification.

¹⁹³ Section 97.113(b) of the Commission's Rules generally prohibits an amateur station from engaging in any form of broadcasting or program production or news gathering activities for broadcasting purposes, except communications directly related to the immediate safety of human life or the protection of property where no other means of communication is available.

¹⁹⁴ See Robert H. Birdsey Petition For Rule Making at 1 (filed Feb. 20, 2002) (Birdsey Petition). The petition was placed on public notice on July 3, 2002. See *Public Notice*, Report No. 2561(rel. Jul. 3, 2002). No comments were received.

¹⁹⁵ See *id*

¹⁹⁶ See 47 C.F.R. § 97.3(a)(10). See also 47 C.F.R. § 2.1(c).

¹⁹⁷ See *id*

¹⁹⁸ 47 C.F.R. § 97.111(b).

¹⁹⁹ 47 C.F.R. § 97.113(b). See also, Reorganization and Deregulation of Part 97 of the Rules Governing the Amateur Radio Service, PR Docket No. 88-139, *Report and Order*, 4 FCC Rcd 4719 (1989).

²⁰⁰ 47 C.F.R. § 97.3(a)(10).

²⁰¹ 47 C.F.R. § 97.111(b)(6).

²⁰² 47 C.F.R. § 97.3(c)(9).

²⁰³ 47 C.F.R. § 97.3(c)(1).

²⁰⁴ 47 C.F.R. § 97.3(c)(2).

inconsistent with the definition and purpose of the amateur service.²⁰⁵ For these reasons, we deny the petition.

3. Information Bulletin Transmission Limitations.

42. *Background.* Our Rules authorize amateur stations to transmit one-way communications to assist persons in learning the international Morse code²⁰⁶ and to disseminate information bulletins.²⁰⁷ On April 11, 2002, Mr. John J. Elengo requested that we amend our Rules to impose three conditions on amateur stations that transmit information bulletins: (a) limit these stations to a single transmission that does not exceed fifteen minutes; (b) require a time period between successive transmissions of not less than two hours; and (c) limit such transmissions in any given amateur service band to four per amateur station per 24-hour period.²⁰⁸ Petitioner argues that such transmissions should be short and to the point and not continue unabated.²⁰⁹ Petitioner notes that lengthy transmissions of information bulletins precludes other amateur stations from transmitting other communications, and that there are other avenues available for disseminating the information contained in such bulletins.²¹⁰

43. On January 22, 2003, Mr. Jonathan S. Gunn requested that we amend our Rules to define the term "one-way voice broadcast"²¹¹ transmissions and impose limitations on these transmissions.²¹² Gunn proposes that we define "one-way voice broadcasts" as any voice transmission which is primarily intended to convey information, but which is not reasonably designed to establish immediate two-way communications with the station emitting the broadcast.²¹³ Additionally, he requests that we impose four limitations on amateur stations that transmit one-way voice broadcasts, including information bulletins: (a) limit a single transmission from a station to not more than thirty minutes; (b) limit multiple transmissions from any amateur station to sixty minutes per [each] 24-hour period; (c) require a time period of not less than eight hours between successive transmissions on the same amateur service band; and (d) require that the control operator of a station take reasonable steps to assure that these transmissions will not cause interference to ongoing communications.²¹⁴ Petitioner explains that because the amateur service rules presently do not contain any clear limitations on one-way voice broadcasts, an amateur station theoretically could transmit these broadcasts twenty-four hours a day, seven days

²⁰⁵ See para. 4, *supra*. See also, 47 C.F.R. § 2.1(c) for the definitions of the amateur service and broadcasting service.

²⁰⁶ See 47 C.F.R. § 97.111(b)(5).

²⁰⁷ See 47 C.F.R. § 97.111(b)(6). An information bulletin is a message directed only to amateur operators consisting of subject matter solely directed to the amateur service. See 47 C.F.R. § 97.3(a)(26).

²⁰⁸ See John J. Elengo Petition For Rule Making at 1 (filed Mar. 18, 2002) (Elengo Petition).

²⁰⁹ See *id.*, citing the AARA's occasional use of a talk show format similar to that used by broadcast stations.

²¹⁰ See *id.* at 3. Petitioner states that information bulletins can be distributed via readily obtainable and periodically printed publications and via the internet.

²¹¹ See Jonathan S. Gunn Petition For Rule Making at 2 (filed Jan. 22, 2003) (Gunn Petition).

²¹² See *id.*

²¹³ See *id.* at 2.

²¹⁴ See *id.*

a week, thereby effectively claiming a frequency or number of frequencies for its exclusive use.²¹⁵ Petitioner argues that lengthy transmissions of one-way voice broadcasts are inconsistent with shared use of amateur service frequencies because such transmissions make it impracticable for other licensees to use the frequency, may impede the use of amateur service frequencies for emergency communications, may disrupt ongoing communications when they commence, and are inconsistent with the purpose of the amateur service.²¹⁶

44. On January 30, 2003, Mr. Bob Sherin requested that we amend our Rules to delineate two types of information bulletins: (a) spontaneous bulletins such as weather alerts and (b) recurrent bulletins.²¹⁷ The petitioner requests that we examine the subject matter of recurrent bulletins and that we directly regulate these bulletins, and that we limit the number and length of transmissions and the frequency diversity of recurrent bulletin transmissions.²¹⁸ Petitioner argues that there has been long misuse of recurrent information bulletin transmission on the HF bands.²¹⁹

45. On February 12, 2003, Mr. Phillip E. Galasso requested that we amend our Rules to prohibit amateur stations from transmitting information bulletins on amateur service frequency bands between 1.8 MHz and 30 MHz and to define information bulletin transmissions as a prohibited broadcast transmission.²²⁰ Petitioner argues that such transmissions cause harmful interference to other communications²²¹ and that information bulletin transmissions have become obsolete in light of avenues, such as the sites on the internet and electronic mail to members of amateur radio organizations, that are available for disseminating information.²²² Petitioner also notes that FCC-licensed HF broadcast stations may sell air-time to anyone who wants wide coverage of their views and that individuals who desire to broadcast on the amateur service bands may buy time on these commercial stations.²²³

46. *Discussion.* An information bulletin is a one-way transmission consisting solely of subject matter directly related to the amateur service.²²⁴ In 1988, the former Private Radio Bureau considered and denied a request to limit information bulletin transmissions to ten minutes per twenty-four hours.²²⁵ The Private Radio Bureau stated that the degree of congestion caused by stations transmitting information bulletins was not sufficiently serious to warrant an enforced time limit on such transmissions and that there was no showing that such bulletins were of lesser importance than other types of permitted transmissions.²²⁶ For these reasons, the Commission

²¹⁵ See *id.* at 1.

²¹⁶ See *id.*

²¹⁷ See Bob Sherin Notice of Inquiry at 1 (filed Jan. 30, 2003) (Sherin Petition).

²¹⁸ See *id.*

²¹⁹ See *id.*

²²⁰ See Phillip E. Galasso Petition For Rule Making at 3 (filed Feb. 12, 2003) (Galasso Petition).

²²¹ See *id.* at 2.

²²² See *id.* at 2-3.

²²³ See *id.* at 3.

²²⁴ See 47 C.F.R. § 97.3(a)(26).

²²⁵ See Petition to Amend Section 97.113(d)(2) of the Commission's Rules to Impose a Time Limit on Information Bulletins, *Order*, 3 FCC Rcd 1859 (1988).

²²⁶ See *id.*

concluded that it would not serve the public interest to amend the rules as requested.²²⁷

47. The Commission has historically relied on the judgment of the station's control operator in determining the content, length, frequency, and emission type of information bulletins. We do not believe that it would serve the interest of the amateur service community to impose rules limiting the flexibility of licensees regarding these transmissions. Rather, we believe that limiting such bulletins to the extent requested would prohibit or severely restrict²²⁸ the ability of an amateur station to provide near real-time information other amateur stations and the public desire, including information concerning severe weather, disasters, and operating information.²²⁹ Petitioners have provided no evidence that frequency congestion is being caused by stations transmitting information bulletins, that permitting amateur stations to transmit information bulletins is hindering other amateur service communications, or that such bulletins are not serving the public interest. Accordingly, we find no reason to warrant proposing changing our Rules at this time and we deny the petitions.

C. Amateur Station Call Sign Systems.

1. Vanity Call Sign System.

48. In Memoriam provisions. *Background.* The license trustee of an amateur service club station may request assignment of a deceased club member's station call sign to the club with the written consent of a relative, before the call sign becomes generally available for assignment.²³⁰ However, our Rules for the vanity call sign system do not permit the licensee of an amateur station, while living, to designate the recipient club, *in memoriam*.²³¹

49. On October 26, 2001, the Quarter Century Wireless Association, Inc., sought amendment of our Rules to allow currently licensed amateur radio operators to designate a specific amateur radio club to acquire their call sign *in memoriam*.²³² In support of this request, QCWA explains that the vanity call sign system omits the most qualified individuals – licensees – from executing a written statement expressing a desire as to which radio club receives their call signs *in memoriam*.²³³ This omission, QCWA notes, requires a relative to make this designation *post mortem*.²³⁴ QCWA recommends that the *in memoriam* provision should rely on either a

²²⁷ See *id.*

²²⁸ For example, these restrictions would prohibit a station from transmitting brief but frequent one-way messages concerning tornadoes, hurricanes and floods. These restrictions would also prohibit an amateur station from transmitting brief (but more than once every two hours) information bulletin messages that other amateur stations desire to receive, such as timely notifications of another station's frequency and scheduled on-air operation.

²²⁹ See e.g., DX Summit at <http://oh2aq.kolumbus.com/dxs/>.

²³⁰ The relative may be a spouse, child, grandchild, stepchild, parent, grandparent, stepparent, brother, sister, stepbrother, stepsister, aunt, uncle, niece, nephew, or in-law of the deceased licensee. See 47 C.F.R. § 97.19(c)(3).

²³¹ See *id.*

²³² See Quarter Century Wireless Association, Inc. Petition For Rule Making (filed Oct. 26, 2001) (QCWA Petition). The QCWA Petition was placed on public notice on January 8, 2002. See *Public Notice*, Report No. 2522 (rel. Jan. 8, 2002). A list of commenters is presented in Appendix B.

²³³ See *id.* at 2-3.

²³⁴ See *id.* at 1.